

Application No.: 09/903374

Docket No.: ATA-297RCE

REMARKS

Upon entry of this Amendment, claims 1-3, 5-9 and 12-21 are pending. Claims 1 and 12 are amended herein, while claims 16-21 are newly added. Reconsideration and allowance of all pending claims in view of the remarks below are hereby requested in view of the remarks below.

Claim Rejections under 35 U.S.C. § 103

Claims 1, 6-7 and 11-12 are rejected under 35 U.S.C. §103(a) as being unpatentable over Tu et al. (U.S. Patent No. 5,016,276) in view of Von Albertini (U.S. Patent No. 4,670,008). Applicants traverse this rejection in view of the remarks below.

Tu provides multi-layered vascular graft formed of a PTFE or PTFE-elastomeric polymer blend, wrapped by an elastic fiber under tension. See the Abstract. As shown in Figure 8, the elastic fiber is illustrated as a fiber yarn 102. The elastic fiber can be wound in different degrees of tension.

Von Albertini does not appear to have any relation to vascular implants, instead providing a needle intended to minimize tearing of skin and tissue by the use of a smaller needle and a tissue stretching device in the form of a cannula that can have threads to essentially be screwed into the hole made by the needle. The cannula itself can then be used as a larger diameter access port to a vascular passage. See the Abstract and column 2, lines 51-63.

Applicants submit that neither Tu nor Von Albertini teach or suggest a membrane wrapped about an exterior surface of a first tube with at least one support structure wound along

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an exterior surface of the membrane, as recited in claim 1. Applicants assert that the fiber yarn of Tu is not a membrane.

Regarding claim 7, Applicants reference an example of an illustration of a winding axis, shown as A in Figure 1 and the paragraph bridging pages 7 and 8 of the specification. Applicants assert that orienting the nodes as recited in claim 7 would not be a matter of obvious design choice. The Office Action asserts in numbered paragraph 5 that "[A]pplicant has not provided evidence that the stated angle provides any advantage, nor that any unexpected result would arise from the configuration disclosed by Tu." Applicants assert that there is no requirement to provide evidence pertaining to configurations disclosed in references.

Claims 6-7 are also patentable at least by way of their dependency from claim 1. Applicants note that claim 11 was previously canceled.

Claim 12 is patentable over Tu in view of Von Albertini at least because they do not teach or suggest the steps of wrapping a membrane about an exterior surface of a first tube and winding at least one support structure along an exterior surface of the membrane, as recited in claim 12.

Claims 2-3, 5, and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tu et al. (U.S. Patent No. 5, 016,276) in view of Von Albertini (U.S. Patent No. 4,670,008) and further in view of Martakos et al. (U.S. Patent No. 5,897,587). Applicants traverse this rejection.

Martakos provides a multi-stage prosthesis that can involve a first member constituting flow passage with a support bead disposed on an exterior surface of the first member. In this example, a polymer membrane is placed over the support bead. See claim 1 and Figures 1A-1D.

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In view of the above, Martakos does not overcome the deficiencies of the combination of Tu and Von Albertini. The references in combination do not teach or suggest a support structure wound about an exterior surface of a membrane. Therefore, the rejection of claims 2-3, 5 and 8-9 should be withdrawn at least because the claims are patentable by way of their dependency from claim 1.

Claims 13-15 are rejected under 35 U.S.C. §103(a) as being unpatentable over Tu et al. (U.S. Patent No. 5,016,276) in view of Von Albertini (U.S. Patent No. 4,670,008) and further in view of Kalis et al. (U.S. Patent No. 5,609,624). Applicants traverse this rejection in view of the remarks below.

Kalis involves a reinforced vascular graft. Integral and monolithic expanded PTFE rib structures are provided with a porosity substantially identical to that of the tubular graft wall. Kalis teaches away from a beaded graft at column 3, lines 5-20, noting that the handling of the graft during implantation is enhanced over a non-beaded graft. While, Kalis may assert that increased matrix tensile strength can be provided, as apparently asserted by the Office Action, the Office Action provides no credible reasoning for why enhanced tensile strength would be desired and how it would motivate one of skill in the art to combine a seemingly incompatible structure of Kalis, having integral ribs, with Von Albertini, having nothing to do with synthetic grafts, with Tu, which provides an external fiber yarn under tension to be wrapped around a vascular graft formed of a PTFE or PTFE-elastomeric polymer blend.

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Other Claim Amendments and Newly-Added Claims

Claims 1 and 12 have also been amended to add the words "biologically compatible" to specify the material that may substantially close a hole created when punctured. Applicants note that these amendments were not made in response to a rejection of the claims.

Claims 16-21 have been added and are patentable at least by way of the dependency from claim 1 or claim 12. Support for these claims can be found throughout the application as filed. For example, support for claims 16 and 17 can be found at least in original claim 4. Support for claim 18 can be found at least at page 5, lines 31-32. Support for claim 19 can be found at least at page 7, lines 28-30. Support for claims 20 and 21 can be found at least in Figure 2 and page 5, lines 9-11.

CONCLUSION

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Applicants believe no fee is due with this response. However, if a fee is due, please

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charge our Deposit Account No. 12-0080, under Order No. ATA-297RCE from
which the undersigned is authorized to draw.

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Respectfully submitted,

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